## REMARKS

Claims 1, 8, 9, 11, 14, 15, and 26-29 have been amended for the purpose of clarifying what Applicant regards as the invention. No new matter has been added.

I. Claim Rejections under 35 U.S.C. § 101

Claims 1-29 stand rejected under 35 U.S.C. §101 as failing to produce a useful, concrete, and tangible result.

Claims 1 and 15 have been amended to recite a method that is "computer-implemented." As such, the methods of claims 1 and 15 are clearly not mental steps, but are directed to concrete steps that are implemented using computer(s). Also, claims 1 and 15 are directed to a method for processing a program statement, which includes outputting an output/result to a data stream. As such, the methods of claims 1 and 15 include "transformation of data," which is a useful, concrete, and tangible result. For at least the foregoing reasons, claims 1 and 15 are patentable under 35 U.S.C. §101.

Claims 26 and 28 have been amended to recite that the medium comprises volatile or non-volatile media, which is tangible and distinguishable from carrier waves. For at least this reason, Applicant respectfully submits that the claims 26 and 28 and their respective dependent claims satisfy § 101.

Claims 27 and 29 recite limitations that are means-plus-function limitations. According to 35 U.S.C. § 112, such limitations must be construed based on the structure disclosed in the specification that performs the recited functions. Applicant respectfully notes that examples of structures that may be used to perform the recited functions are disclosed at least in paragraphs 78-83 of the specification. Since the subject specification discloses tangible structure that perform the recited

functions, Applicant respectfully submits that claims 27 and 29 and their respective dependent claims satisfy § 101.

II. Claim Rejections under 35 U.S.C. § 103

Claims 1-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over "Xquery from the Experts: A Guide to the W3C WML Query Language, ISBN: 0-321-18060-7" (Katz) in view of U.S. Patent Application Publication No. 20040068487 (Barton).

Claims 1, 26, and 27

Claim 1 recites calling and executing the operator for the child node to generate a result, and outputting the result to a data stream *without buffering the result* (Emphasis Added). Claims 26 and 27 recite similar limitations. The cited passages (chapter 6, page 384, paragraphs 2-4) of Katz also do not disclose or suggest such limitations. For at least the foregoing reason, claims 1, 26, and 27, and their respective dependent claims, are believed allowable over Katz, Barton, and their combination.

Claim 1 also recites a method for processing a program statement, which includes determining if the child node relates to an operator for which top-down processing can be performed. Claims 26 and 27 recite similar limitations. The cited passages (chapter 6, page 384, paragraphs 2-4) of Katz do not disclose or suggest the above limitations. Rather, the cited passages disclose:

> Another area that makes the XQuery evaluation more complex than the evaluation of SQL statements is the execution order. The presence of an index often prompts the optimizer to choose a so-called bottom-up evaluation strategy, where first indices are used to filter the processed tuples before any of the other operators are evaluated. Since the naïve execution strategy of XQuery is described top-down, an optimizer may produce dynamic errors by reordering the evaluation order that the top-down evaluation strategy would have avoided. A simple example of this situation appears in the following XQuery expression:
>
> for $i in //A
> where $i/@a castable as xs:integer

```
return
        for $j in $i/B
        where xs:integer($i/@a) > 10
        return
                $j
```

A native, top-down evaluation of the nested for expression would only execute the inner for expression if the value of $i/@a is really castable to xs:integer. However, an optimizer may choose to rewrite the above query to the following equivalent:

```
for $i in //A, $j in $i/B
where $i/@a castable as xs: integer and xs: integer ($i/@a) > 10
return
        $j
```

and then choose to execute the comparison before the check for castability. If then there are a attributes that are not castable to xs:integer, the cast in the comparison will fail with a runtime error that in the naïve evaluation would have been avoided.

(Katz, page 384)

As such, the cited passages of Katz disclose that a bottom-up evaluation strategy may be selected based on the presence of an index, and that this bottom-up evaluation strategy may cause errors. There is nothing in the cited passages of Katz that discloses or suggests a method for processing a program statement that includes the act of determining if a child node relates to an operator for which top-down processing can be performed. According to the Office Action, Katz allegedly discloses code that checks where an element is castable as an integer in top-down processing of child nodes. However, Applicant respectfully submits that the code (see above) disclosed in Katz does not identify an operator for which top-down processing can be performed, nor does it determine if a child node is related to such an operator. Barton also does not disclose or suggest the above limitations, and therefore, fails to make up the deficiencies present in Katz. For this additional reason, claims 1, 26, and 27, and their respective dependent claims, are believed allowable over Katz, Barton, and their combination.

Claims 15, 28, and 29

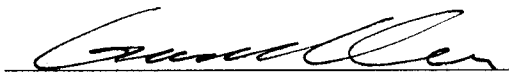
Claim 15 recites that the output from the first child operator node is output to a data stream *without being buffered* (Emphasis Added). Claims 28 and 29 recite similar limitations. As similarly discussed, neither Katz nor Barton discloses or suggests such limitation. For at least the foregoing reason, claims 15, 28, and 29, and their respective dependent claims, are believed allowable over Katz, Barton, and their combination.

Claims 15 also recites determining whether the parent operator node is related to a first child operator node that is eligible for top-down processing. Claims 28 and 29 recite similar limitations. The cited passages (chapter 6, page 384, paragraphs 2-4) of Katz do not disclose or suggest such limitation. In particular, there is nothing in these cited passages of Katz that discloses or suggests the act of determining whether a parent operator node is related to a child operator node that is eligible for top-down processing. Barton also does not disclose or suggest the above limitations, and therefore, fails to make up the deficiencies present in Katz. For this additional reason, claims 15, 28, and 29, and their respective dependent claims, are believed allowable over Katz, Barton, and their combination.

## CONCLUSION

Based on the foregoing, all claims are now allowable and a Notice of Allowance is respectfully requested. If the Examiner has any questions or comments regarding this amendment, the Examiner is respectfully requested to contact the undersigned at (650) 849-4958. The Commissioner is authorized to credit any overpayment or to charge any underpayment to Bingham McCutchen's Deposit Account No. **50-2518,** referencing billing number **7035752001**.

Respectfully submitted,

Dated: February 20, 2007 By: 

Gerald Chan
Registration No. 51,541

BINGHAM McCUTCHEN LLP
Three Embarcadero Center
San Francisco, CA 94111
Telephone: (650) 849-4960
Telefax: (650) 849-4800